

09-05-00

EK 287384752US A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents
Washington, D.C. 20231

Docket No. AUS9-2000-0403-US1

Sir:

Transmitted herewith for filing is the patent application of Inventor(s):

David A. Cordray,
Jerry Walter Malcolm

For: *Notification of Automatically Forwarded Electronic Mail Messages in a Data Processing System*

Enclosed are also:

- ☒ 20 Pages of Specification including an Abstract
☒ 5 Pages of Claims
☒ 6 Sheet(s) of Drawings
☒ A Declaration and Power of Attorney
☒ Form PTO 1595 and assignment of the invention to IBM Corporation

CLAIMS AS FILED

FOR	Number Filed		Number Extra		Rate		Basic Fee (\$690)
Total Claims	23	-20 =	3	X	\$ 18	=	\$54
Independent Claims	7	-3 =	4	X	\$ 78	=	\$312
Multiple Dependent Claims	0			X	\$260	=	\$0
Total Filing Fee							= \$1056

- ☒ Please charge \$1056.00 to IBM Corporation, Deposit Account No. 09-0447.
☒ The Commissioner is hereby authorized to charge payment of the following fees associated with the communication or credit any over payment to IBM Corporation, Deposit Account No. 09-0447. A duplicate copy of this sheet is enclosed.
☒ Any additional filing fees required under 37CFR § 1.16.
☒ Any patent application processing fees under 37CFR § 1.17.

Respectfully,



Marilyn Smith Dawkins
Reg. No. 31,140
Intellectual Property Law Dept.
IBM Corporation
11400 Burnet Road 4054
Austin, Texas 75758
Telephone: (512) 823-0094

08/31/00
JC887 U.S. PTO

JC714 U.S. PTO
09/653245
08/31/00

09/05/00 08:31:00

Docket No. AUS9-2000-0403-US1

**NOTIFICATION OF AUTOMATICALLY FORWARDED ELECTRONIC MAIL
MESSAGES IN A DATA PROCESSING SYSTEM**

BACKGROUND OF THE INVENTION

5

1. Technical Field:

The present invention relates generally to an improved data processing system, and in particular to a method and apparatus for processing electronic mail
10 messages. Still more particularly, the present invention relates generally to a method and apparatus for processing automatically forwarded electronic mail messages.

15 **2. Description of Related Art:**

The Internet, also referred to as an "internetwork", is a set of computer networks, possibly dissimilar, joined together by means of gateways that handle data transfer and the conversion of messages from the sending network to
20 the protocols used by the receiving network (with packets if necessary). When capitalized, the term "Internet" refers to the collection of networks and gateways that use the TCP/IP suite of protocols.

The Internet has become a cultural fixture as a
25 source of both information and entertainment. Many businesses are creating Internet sites as an integral part of their marketing efforts, informing consumers of the products or services offered by the business or providing other information seeking to engender brand loyalty. Many
30 federal, state, and local government agencies are also employing Internet sites for informational purposes,

Docket No. AUS9-2000-0403-US1

particularly agencies which must interact with virtually all segments of society such as the Internal Revenue Service and secretaries of state. Providing informational guides and/or searchable databases of online public records may reduce operating costs. Further, the Internet is becoming increasingly popular as a medium for commercial transactions.

The Internet also provides a medium for sending electronic mail messages between different users or recipients. These electronic mail messages are also referred to as email. With email, a user may send a message to one or more recipients almost instantaneously. Some users may have more than one email address. Additionally, email addresses are constantly changing for different reasons. Sometimes, a user may change service providers and receive a new email address. Other times, a service provider may be bought by or merged with another service provider. Sometimes when a service provider is bought or merged with another service provider, the combined entity will force or require some users to change domain names to have a consistent domain name in the email addresses.

When such a situation occurs, a user changing email addresses is required to notify everyone of the email address change. In many cases, when a change in domain name is required by a service provider, a grace period may be present in which both email addresses are accepted. When a user changes service providers, the user typically will maintain the old email address for a period of time and have the email sent to the old address forwarded to the new address.

It is important for a user to recognize that email is

Docket No. AUS9-2000-0403-US1

being forwarded from the original address to the new address in order to notify the sender of the email of the address change. Currently, this forwarding must be detected by looking at the "to:" field in the message to determine whether the address is the old address. In some cases, the message may be sent to many recipients in which all of these recipients are listed in the "to:" field. Such a procedure can become tedious when many recipients are listed for the email. Further, even if the user is meticulous in checking every email received to see whether it was forwarded from an old address, the address may not appear at all. For example, some email may be sent via distribution lists using a remailer program. In this case, the sender sends a note addressed to the distribution list on the server and the program distributes the email to all addresses currently found on the list. The "to:" field in the note may show for example, "distlistmail@abcd.org" rather than all of the addresses in the list. The actual address in this case is located in the routing information, but this information is typically removed by many email programs.

Therefore, it would be advantageous to have an improved method and apparatus for processing forwarded email messages to allow a user to identify messages forwarded from an old email address.

Docket No. AUS9-2000-0403-US1

SUMMARY OF THE INVENTION

The present invention provides a method, system, and program in a data processing system for processing an electronic mail message. The electronic mail message is identified for a recipient. It is determined whether the electronic mail message for the recipient is being forwarded from another address associated with the recipient. An indicator is included to identify the electronic mail message as being forwarded if the electronic mail message being forwarded is from another address associated with the recipient.

Docket No. AUS9-2000-0403-US1

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

Figure 1 depicts a pictorial representation of a distributed data processing system in which the present invention may be implemented;

Figure 2 is a block diagram of a data processing system that may be implemented as a server in accordance with a preferred embodiment of the present invention;

Figure 3 is a block diagram illustrating a data processing system in which the present invention may be implemented;

Figure 4 is a diagram illustrating an indicator for use in an email message in accordance with a preferred embodiment of the present invention;

Figure 5 is a diagram illustrating components and data flow used in indicating forwarding of email messages in accordance with a preferred embodiment of the present invention; and

Figure 6 is a flowchart of a process used for providing indicators for forwarded email messages in accordance with a preferred embodiment of the present invention.

Docket No. AUS9-2000-0403-US1

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the figures, **Figure 1** depicts a
5 pictorial representation of a data processing system
network in which the present invention may be implemented.
Data processing system network **100** is a network of
computers in which the present invention may be
implemented. Data processing system network **100** contains
10 a network **102**, which is the medium used to provide
communications links between various devices and computers
connected together within data processing system network
100. Network **102** may include permanent connections, such
as wire or fiber optic cables, or temporary connections
15 made through telephone connections.

In the depicted example, a server **104** is connected to
network **102** along with proxy server **106**. In addition,
clients **108**, **110**, and **112** also are connected to network
102. These clients **108**, **110**, and **112** may be, for example,
20 personal computers or network computers. In the depicted
example, server **104** provides data, such as boot files,
operating system images, and applications to clients
108-112. Server **104** also may serve to receive and
distribute email messages to different clients. In the
25 depicted examples, proxy server **106** also may serve to
distribute email messages to different clients. In this
example, proxy server **106** may receive messages from server
104 for distribution to different clients.

Clients **108**, **110**, and **112** are clients to server **104**.
30 Distributed data processing system **100** may include
additional servers, clients, and other devices not shown.

Docket No. AUS9-2000-0403-US1

In the depicted example, data processing system network 100 is the Internet with network 102 representing a worldwide collection of networks and gateways that use the TCP/IP suite of protocols to communicate with one another.

5 At the heart of the Internet is a backbone of high-speed data communication lines between major nodes or host computers, consisting of thousands of commercial, government, educational and other computer systems that route data and messages. Of course, data processing
10 system network 100 also may be implemented as a number of different types of networks, such as for example, an intranet, a local area network (LAN), or a wide area network (WAN). **Figure 1** is intended as an example, and not as an architectural limitation for the present invention.

15 Referring to **Figure 2**, a block diagram of a data processing system that may be implemented as a server, such as server 104 or proxy server 106 in **Figure 1**, is depicted in accordance with a preferred embodiment of the present invention. In particular, server 200 contains the
20 processes used to notify users or recipients of email messages that an email has been forwarded. The notification mechanism of the present invention includes an indicator or indication in the email message that the email message has been forwarded from another address
25 associated with the user or recipient.

Server 200 may be a symmetric multiprocessor (SMP) system including a plurality of processors 202 and 204 connected to system bus 206. Alternatively, a single processor system may be employed. Also connected to
30 system bus 206 is memory controller/cache 208, which provides an interface to local memory 209. I/O bus bridge

Docket No. AUS9-2000-0403-US1

210 is connected to system bus 206 and provides an interface to I/O bus 212. Memory controller/cache 208 and I/O bus bridge 210 may be integrated as depicted.

Peripheral component interconnect (PCI) bus bridge 214 connected to I/O bus 212 provides an interface to PCI local bus 216. A number of modems may be connected to PCI bus 216. Typical PCI bus implementations will support four PCI expansion slots or add-in connectors. Communications links to network computers 108-112 in Figure 1 may be provided through modem 218 and network adapter 220 connected to PCI local bus 216 through add-in boards.

Additional PCI bus bridges 222 and 224 provide interfaces for additional PCI buses 226 and 228, from which additional modems or network adapters may be supported. In this manner, data processing system 200 allows connections to multiple network computers. A memory-mapped graphics adapter 230 and hard disk 232 may also be connected to I/O bus 212 as depicted, either directly or indirectly.

Those of ordinary skill in the art will appreciate that the hardware depicted in Figure 2 may vary. For example, other peripheral devices, such as optical disk drives and the like, also may be used in addition to or in place of the hardware depicted. The depicted example is not meant to imply architectural limitations with respect to the present invention.

The data processing system depicted in Figure 2 may be, for example, an IBM RISC/System 6000 system, a product of International Business Machines Corporation in Armonk, New York, running the Advanced Interactive Executive (AIX)

Docket No. AUS9-2000-0403-US1

operating system.

With reference now to **Figure 3**, a block diagram illustrating a data processing system in which the present invention may be implemented is depicted. Data processing system **300** is an example of a client computer. Data processing system **300** employs a peripheral component interconnect (PCI) local bus architecture. Although the depicted example employs a PCI bus, other bus architectures such as Accelerated Graphics Port (AGP) and Industry Standard Architecture (ISA) may be used. Processor **302** and main memory **304** are connected to PCI local bus **306** through PCI bridge **308**. PCI bridge **308** also may include an integrated memory controller and cache memory for processor **302**. Additional connections to PCI local bus **306** may be made through direct component interconnection or through add-in boards. In the depicted example, local area network (LAN) adapter **310**, SCSI host bus adapter **312**, and expansion bus interface **314** are connected to PCI local bus **306** by direct component connection. In contrast, audio adapter **316**, graphics adapter **318**, and audio/video adapter **319** are connected to PCI local bus **306** by add-in boards inserted into expansion slots. Expansion bus interface **314** provides a connection for a keyboard and mouse adapter **320**, modem **322**, and additional memory **324**. Small computer system interface (SCSI) host bus adapter **312** provides a connection for hard disk drive **326**, tape drive **328**, and CD-ROM drive **330**. Typical PCI local bus implementations will support three or four PCI expansion slots or add-in connectors.

An operating system runs on processor **302** and is used to coordinate and provide control of various components

Docket No. AUS9-2000-0403-US1

within data processing system 300 in **Figure 3**. The operating system may be a commercially available operating system, such as Windows 2000, which is available from Microsoft Corporation. An object oriented programming system such as Java may run in conjunction with the operating system and provides calls to the operating system from Java programs or applications executing on data processing system 300. "Java" is a trademark of Sun Microsystems, Inc. Instructions for the operating system, the object-oriented operating system, and applications or programs are located on storage devices, such as hard disk drive 326, and may be loaded into main memory 304 for execution by processor 302.

Those of ordinary skill in the art will appreciate that the hardware in **Figure 3** may vary depending on the implementation. Other internal hardware or peripheral devices, such as flash ROM (or equivalent nonvolatile memory) or optical disk drives and the like, may be used in addition to or in place of the hardware depicted in **Figure 3**. Also, the processes of the present invention may be applied to a multiprocessor data processing system.

For example, data processing system 300, if optionally configured as a network computer, may not include SCSI host bus adapter 312, hard disk drive 326, tape drive 328, and CD-ROM 330, as noted by dotted line 332 in **Figure 3** denoting optional inclusion. In that case, the computer, to be properly called a client computer, must include some type of network communication interface, such as LAN adapter 310, modem 322, or the like. As another example, data processing system 300 may

Docket No. AUS9-2000-0403-US1

be a stand-alone system configured to be bootable without relying on some type of network communication interface, whether or not data processing system 300 comprises some type of network communication interface. As a further
5 example, data processing system 300 may be a Personal Digital Assistant (PDA) device, which is configured with ROM and/or flash ROM in order to provide non-volatile memory for storing operating system files and/or user-generated data.

10 The depicted example in **Figure 3** and above-described examples are not meant to imply architectural limitations. For example, data processing system 300 also may be a notebook computer or hand held computer in addition to taking the form of a PDA. Data processing
15 system 300 also may be a kiosk or a Web appliance.

The present invention provides a method, apparatus, and program for indicating that an email message has been forwarded from an email address associated with a recipient. This associated address is typically an old
20 email address that the recipient intends to no longer use after a period of time. The mechanism of the present invention identifies these type of email addresses and adds or includes an indicator with the email message. In the depicted example, the indicator takes the form of a
25 block of text added to the body of the email message.

Turning next to **Figure 4**, a diagram illustrating an indicator for use in an email message is depicted in accordance with a preferred embodiment of the present invention. In this example, indicator 400 is a visual
30 indicator that is placed within an email message. Specifically, indicator 400 is placed in the body portion

Docket No. AUS9-2000-0403-US1

of the message. The body portion of an email message is that portion of the email message in which the actual content of the message is placed.

In this example, indicator 400 takes the form of text, identifying the message as being an email message forwarded from a particular address and reminding the recipient to notify the sender of the new address. Further, this text may be placed using different colors than the text of the rest of the message in the email message. Depending on the particular implementation, the indicator may take different forms other than that as illustrated by indicator 400. For example, a graphical indicator may be used instead of text. The indicator may be another window, such as a browser, which is automatically launched when the email is viewed. Audio indicators may be used in place of or in addition to the visual indicators. An audio indicator may be, for example, a ".wav" file that is played or presented when the email message is viewed.

Turning next to **Figure 5**, a diagram illustrating components and data flow used in indicating forwarding of email messages is depicted in accordance with a preferred embodiment of the present invention. In this example, proxy server 500 receives email messages from an email server 502. These email messages are forwarded to different recipients, such as recipient 504. Of course, these processes also may be implemented in an email server, such as email server 502, rather than proxy server 500 used to forward email messages.

Email messages are received and placed into incoming email 506 to await processing. Incoming email 506 may

Docket No. AUS9-2000-0403-US1

be, for example, a buffer or queue used for holding email messages until they are processed. Email process 508 examines each email message within incoming email 506 to see whether the email is to be forwarded to another address for the recipient. If the email message is to be forwarded to another email address other than the original email address in the email message, a notification will be placed into the email message or associated with the email message from notification database 510. This notification may take the form of indicator 400 in Figure 4. The notification may include, for example, the old email address that the sender used as well as an indication to notify the sender of the new email address. Of course, the indicator selected from notification database 510 may take other forms, such as using graphics or audio presentation.

Further, email process 508 also may place an advertisement into the email message from advertisement database 512. Also, a user may be billed for the notification service. In such a case, billing database 514 is updated by email process 508 each time a particular user receives a notification of a forwarded email message. Billing database 514 may include an identification of the recipient who is to receive notifications of forwarded email messages and tracking information to identify the number of times that notifications have been placed in an email message.

When the email message has been processed, the message is placed into outgoing email 516 for delivery to a recipient, such as recipient 504. Like incoming email 506, outgoing email 516 may be a buffer or queue for

Docket No. AUS9-2000-0403-US1

processed email messages in these examples.

Proxy server **500** provides a mechanism for forwarding email messages with indicators. Proxy server **500** further provides a mechanism in which advertisements or billing
5 may occur for email messages being forwarded to a particular recipient. Additionally, existing mail servers are not required to make changes to support this forwarding mechanism in which indicators are added or associated with an email message.

10 Turning next to **Figure 6**, a flowchart of a process used for providing indicators for forwarded email messages is depicted in accordance with a preferred embodiment of the present invention. In these examples, the process illustrated in **Figure 6** may be implemented
15 within an email server such as server **104** or proxy server **106** in **Figure 1**.

The process begins by receiving an email message (step **600**). A recipient is then identified for the email message (step **602**). Next, a determination is made as to
20 whether the email message is a forwarded email message for another address for the recipient (step **604**). If the message is to be forwarded, then a determination is made as to whether the recipient is to receive an indicator notifying the recipient that the email message is a
25 forwarded email message (step **606**).

If the recipient is to receive a notification, an indicator of the forwarding of the message is added to the body of the email message (step **608**). In these examples, the indicator is added to the body of the email
30 message, using an indicator, such as indicator **400** in **Figure 4**. Of course, other types of indicators, such as

Docket No. AUS9-2000-0403-US1

those described above, may be added to the body of the text or associated with the email message depending on the implementation.

Next, a determination is made as to whether an advertisement is to be added to the email message (step 610). Depending on the implementation, an advertisement may be placed in the message as a mechanism to generate revenues for the function from entities wanting to distribute advertisements. If an advertisement is to be added, the advertisement is added to the email message (step 612). Then, a determination is made as to whether the recipient or some other entity is to be billed for the addition of the indicator to the email message (step 614). It is also possible that the billing is simply a subscription service, not a per-mail-item charge. The process proceeds directly to this step from step 610 if an advertisement is not to be added to the message. The billing function provides another mechanism to generate revenues for providing the indicator service for forwarded email messages. If billing is to occur, a billing database for the recipient or other entity is then updated to reflect the processing of the email message (step 616). Thereafter, the email message is sent to the recipient (step 618) with the process terminating thereafter.

With reference again to step 614, if billing is not to occur, the process proceeds directly to step 618 as described above. Referring back to step 606, if the recipient is not to be notified, then the process proceeds to step 618. Turning back to step 604, if the email message is not one that is being forwarded from

Docket No. AUS9-2000-0403-US1

another email address associated with the recipient, then the process proceeds directly to step 618.

The process described in **Figure 6** will add the notification information to the message and remail the message to the forwarding address if the process is implemented as part of an email server. Alternatively, if implemented in a proxy server, the email server is configured to forward all incoming mail to the address for the proxy server. The proxy server will add the notification prior to forwarding the message to the recipient. Thus, when implemented with a proxy server, two "hops" are required to send the message to the recipient.

The mechanism of the present invention is particularly useful when an email address for a recipient is to change. For example, a user has an email address JerryMalcolm@ibm.net that is going away as a result of a merger or change in ownership. The host has an email mailbox server that hosts a mailbox called JerryMalcolm. The owner of that mailbox is able to have the mail server hold mail for collection by the user's mail program, such as that provided in Netscape Navigator. Alternatively, the user may have messages forwarded to a new email address, such as Jerry@Malcolms.com. If the host mailbox server has implemented the mechanism of the present invention, the user may have the email server append the forwarding notification information to the body of the note as it does the forwarding. If the host email server does not implement the mechanism of the present invention, but "abc123.com" has a server that does and is in the business of providing notifications, the user may contract with abc123.com to provide the user a mailbox on

Docket No. AUS9-2000-0403-US1

their server for a period of time. The user would have the host email server forward the user's messages to JerryMalcolm@abc123.com. Subsequently, the user would have the server for abc123.com forward incoming messages
5 to Jerry@Malcolms.com and also append the forwarding notification. In turn, abc123.com may either charge the user for the service, such as in the form of a subscription or a per-item charge. Alternatively, abc123.com may obtain revenues for the service by selling
10 advertisement space in the notifications and append advertisements along with the notifications.

Thus, the present invention provides an improved method, apparatus, and program for a forwarding service or mechanism for forwarding information to an email
15 message. An indicator is added to an email message that is forwarded from another email address associated with the recipient. This indicator is used to provide notification to the recipient that the email message was sent to another email address and forwarded to the
20 recipient. The indicator is also used to allow the recipient to notify the sender of the new email address. In the depicted examples, this function is implemented in a proxy server, which receives email messages from email servers. This proxy server identifies whether an email
25 message is being forwarded to another email address for the user and adds the appropriate indicator. Additionally, the addition of advertisements and/or billing may be performed in the proxy server. The use of the proxy server allows the addition of this forwarding
30 service or function without requiring changes to the existing email servers.

It is important to note that while the present

Docket No. AUS9-2000-0403-US1

invention has been described in the context of a fully functioning data processing system, those of ordinary skill in the art will appreciate that the processes of the present invention are capable of being distributed in the form of a computer readable medium of instructions and a variety of forms and that the present invention applies equally regardless of the particular type of signal bearing media actually used to carry out the distribution. Examples of computer readable media include recordable-type media, such as a floppy disk, a hard disk drive, a RAM, CD-ROMs, DVD-ROMs, and transmission-type media, such as digital and analog communications links, wired or wireless communications links using transmission forms, such as, for example, radio frequency and light wave transmissions. The computer readable media may take the form of coded formats that are decoded for actual use in a particular data processing system.

The description of the present invention has been presented for purposes of illustration and description, and is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art. Although the depicted examples illustrated placing the indicator in the body of the electronic message, the indicator may be placed anywhere within the electronic message, such as in the subject field. The embodiment was chosen and described in order to best explain the principles of the invention, the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to

Docket No. AUS9-2000-0403-US1

the particular use contemplated.

096344-0240

Docket No. AUS9-2000-0403-US1

CLAIMS:

What is claimed is:

- 5 1. A method in a data processing system for processing
an electronic mail message, the method comprising:
determining whether the electronic mail message for
a recipient is to be forwarded to another address
associated with the recipient; and
10 including an indicator identifying the electronic
mail message as to be forwarded if the electronic mail
message is to be forwarded to another address associated
with the recipient.
- 15 2. The method of claim 1 further comprising sending the
electronic mail message to the recipient after including
the indicator.
3. The method of claim 1, wherein the indicator is text
20 in a body of the electronic mail message.
4. The method of claim 1, wherein the indicator
identifies the electronic mail message as being forwarded
from the another address.
- 25 5. The method of claim 1, wherein the indicator is an
audio indicator.
6. The method of claim 1, wherein the indicator is a
30 presentation of a wave file.
7. The method of claim 1, wherein the indicator is a

Docket No. AUS9-2000-0403-US1

graphical indicator displayed in a body of the electronic mail message.

8. The method of claim 1 further comprising:

5 updating a billing database for including the indicator for the recipient.

9. The method of claim 1, wherein the indicator further includes an advertisement.

10

10. A method in a data processing system for forwarding an electronic mail message, the method comprising:

receiving a signal to forward the electronic mail message to another address; and

15 including an indication in the electronic mail message that the electronic mail message is forwarded from an address.

11. A data processing system comprising:

20 a bus system;

a communications unit connected to the bus, wherein data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions are located in the memory; and

25 a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to determine whether the electronic mail message for a recipient is being forwarded from another address associated with the recipient and include an
30 indicator identifying the electronic mail message as being forwarded if the electronic mail message being forwarded from another address associated with the

2025 RELEASE UNDER E.O. 14176

Docket No. AUS9-2000-0403-US1

recipient.

12. A data processing system for processing an electronic mail message, the data processing system
5 comprising:

determining means for determining whether the electronic mail message for a recipient is to be forwarded to another address associated with the recipient; and

- 10 including means for including an indicator identifying the electronic mail message as to be forwarded if the electronic mail message is to be forwarded to another address associated with the recipient.

15

13. The data processing system of claim 12 further comprising:

sending means for sending the electronic mail message to the recipient after including the indicator.

20

14. The data processing system of claim 12, wherein the indicator is text in a body of the electronic mail message.

- 25 15. The data processing system of claim 12, wherein the indicator identifies the electronic mail message as being forwarded from the another address.

16. The data processing system of claim 12, wherein the
30 indicator is an audio indicator.

17. The data processing system of claim 12, wherein the

00730 " 3433333333

Docket No. AUS9-2000-0403-US1

indicator is a presentation of a wave file.

18. The data processing system of claim 12, wherein the
indicator is a graphical indicator displayed in a body of
5 the electronic mail message.

19. The data processing system of claim 12 further
comprising:

updating means for updating a billing database for
10 including the indicator for the recipient.

20. The data processing system of claim 12, wherein the
indicator further includes an advertisement.

21. A data processing system for forwarding an
electronic mail message, the data processing system
comprising:

receiving means for receiving a signal to forward
the electronic mail message to another address; and
20 including means for including an indication in the
electronic mail message that the electronic mail message
is forwarded from an address.

22. A computer program product in a computer readable
25 medium for use in a data processing system for processing
an electronic mail message, the computer program product
comprising:

first instructions for determining whether the
electronic mail message for a recipient is to be
30 forwarded to another address associated with the
recipient; and

second instructions for including an indicator

5

23. A computer program product in a computer readable medium for use in a data processing system for forwarding an electronic mail message, the data processing system comprising:

second instructions for including an indication in the electronic mail message that the electronic mail message is forwarded from an address.

Docket No. AUS9-2000-0403-US1

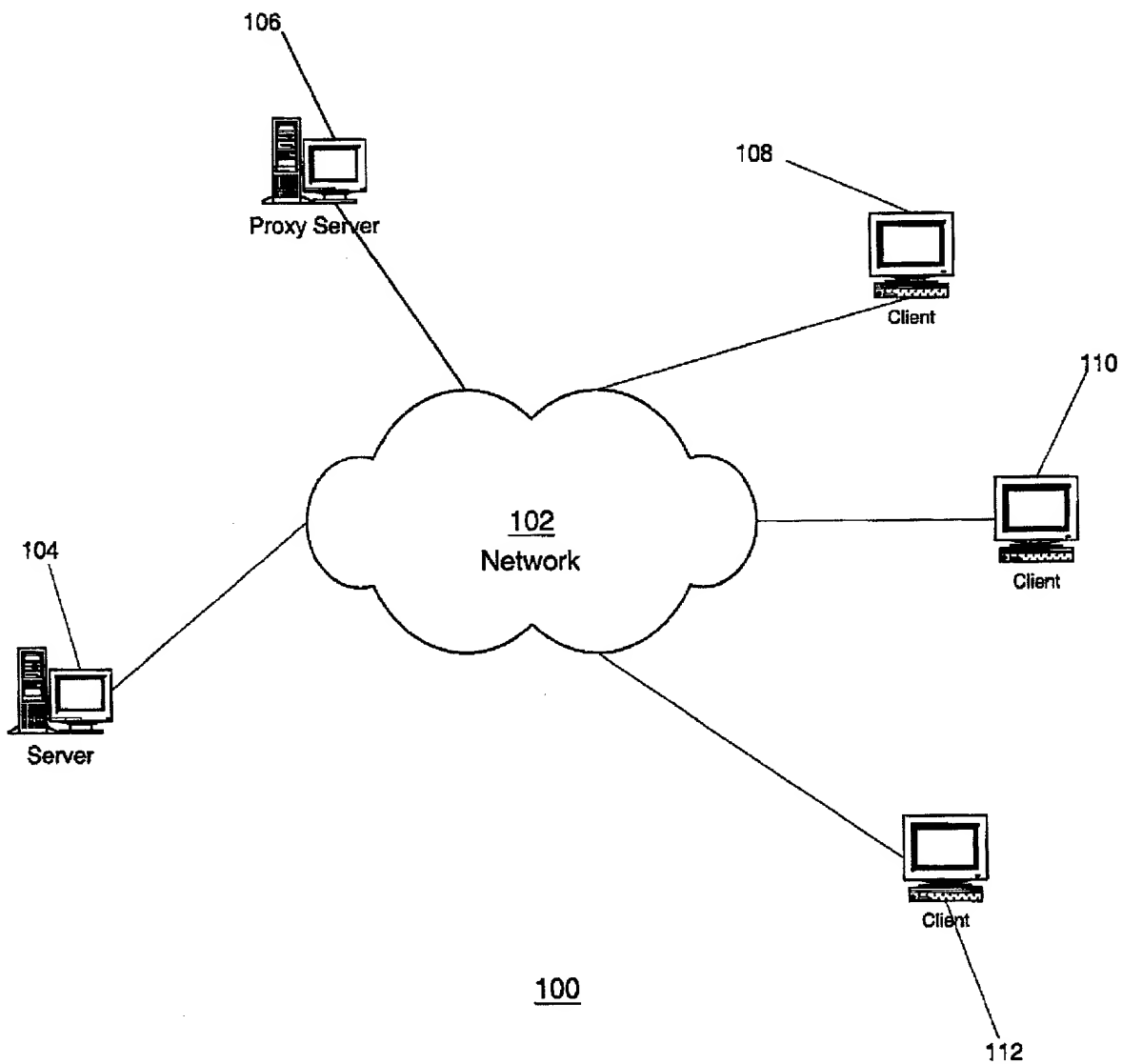
ABSTRACT OF THE DISCLOSURE

**NOTIFICATION OF AUTOMATICALLY FORWARDED ELECTRONIC MAIL
5 MESSAGES IN A DATA PROCESSING SYSTEM**

- A method, system, and program in a data processing system for processing an electronic mail message. The electronic mail message is identified for a recipient.
- 10 It is determined whether the electronic mail message for the recipient is to be forwarded to another address associated with the recipient. An indicator is included to identify the electronic mail message as being forwarded if the electronic mail message is to be
- 15 forwarded to another address associated with the recipient.

2000-0403-US1

AUS9-2000-0403-US1



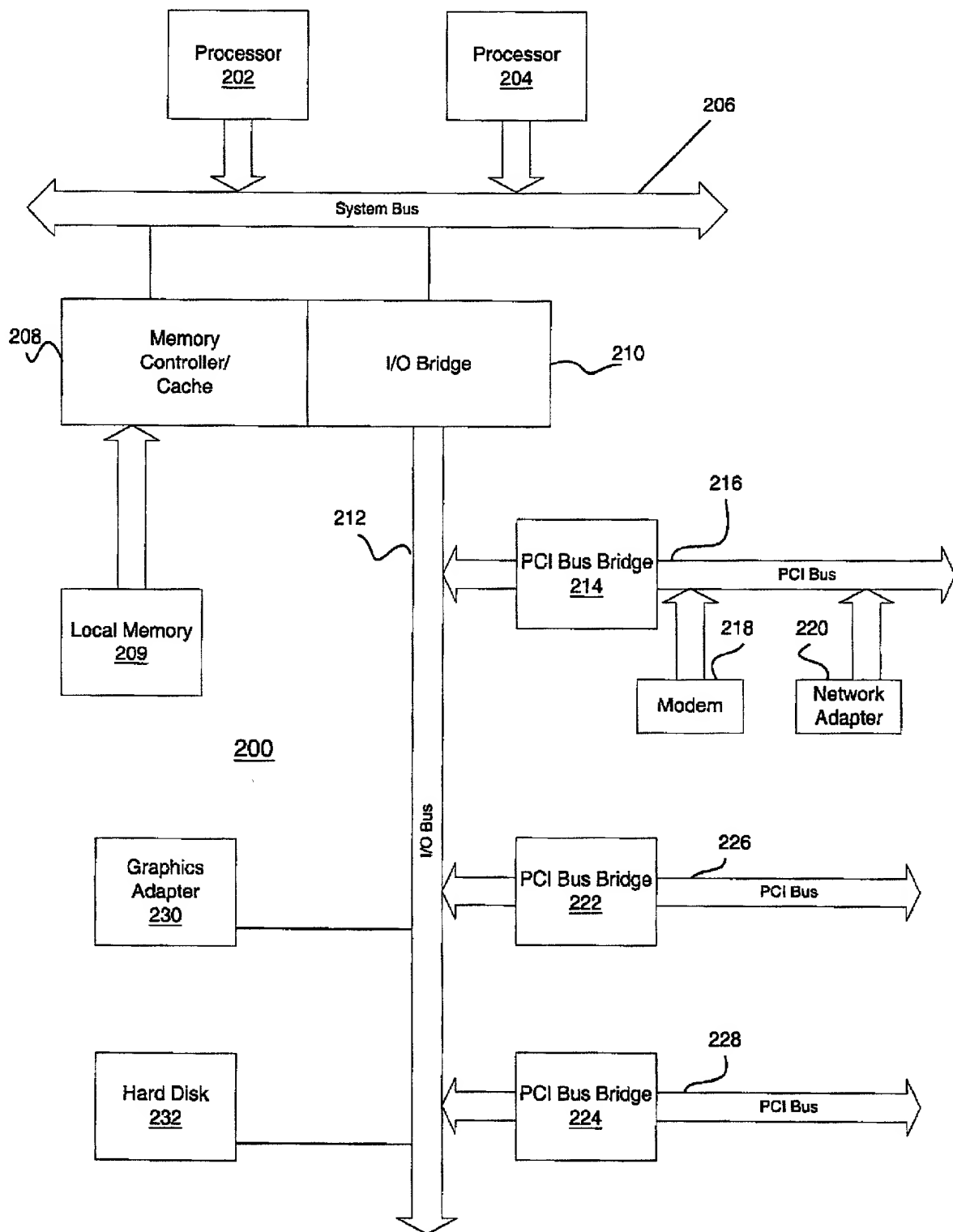


Figure 2

AUS9-2000-0403-US1

AUS9-2000-0403-US1

AUS9-2000-0403-US1

400

Figure 5

AUS9-2000-0403-US1

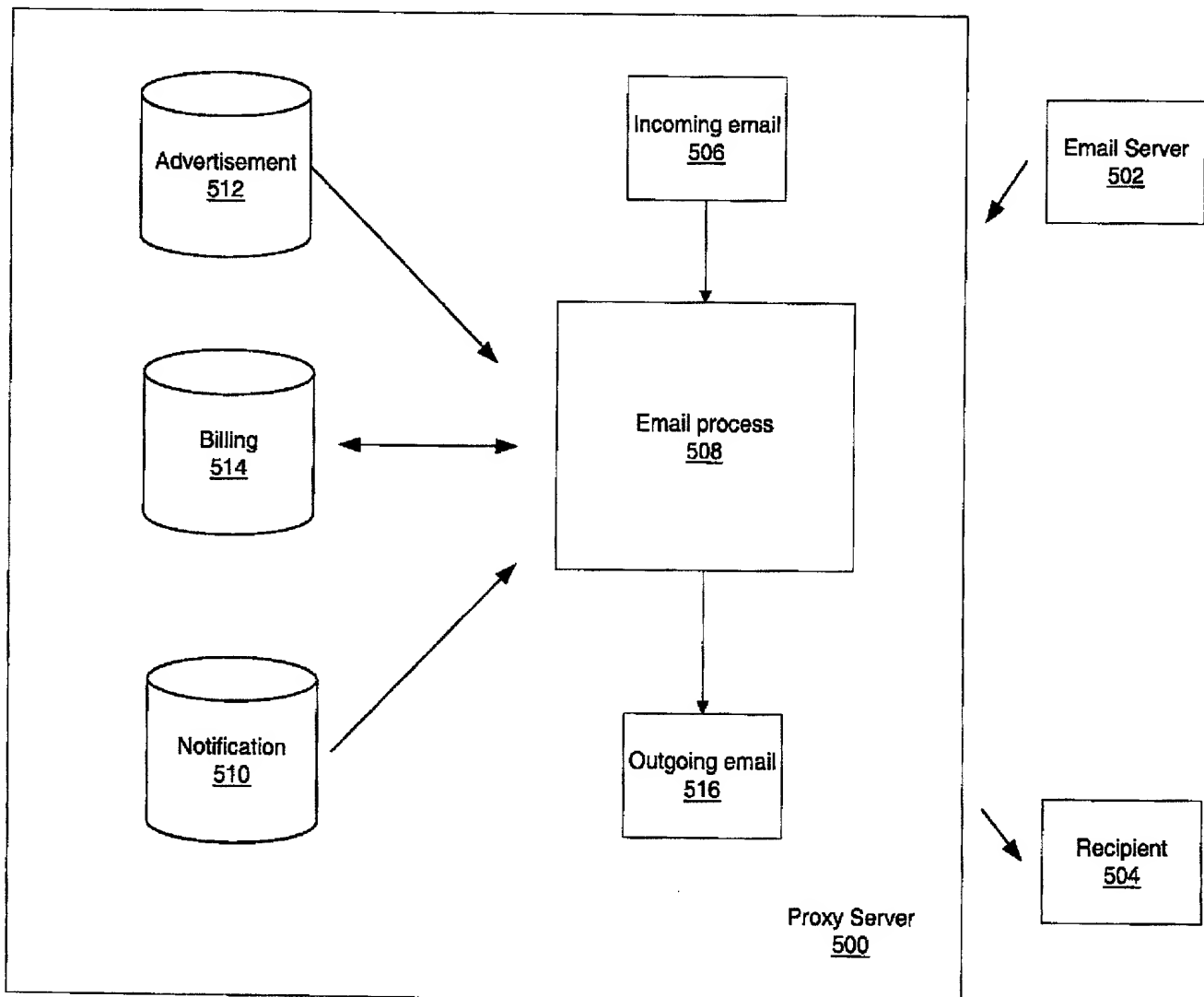
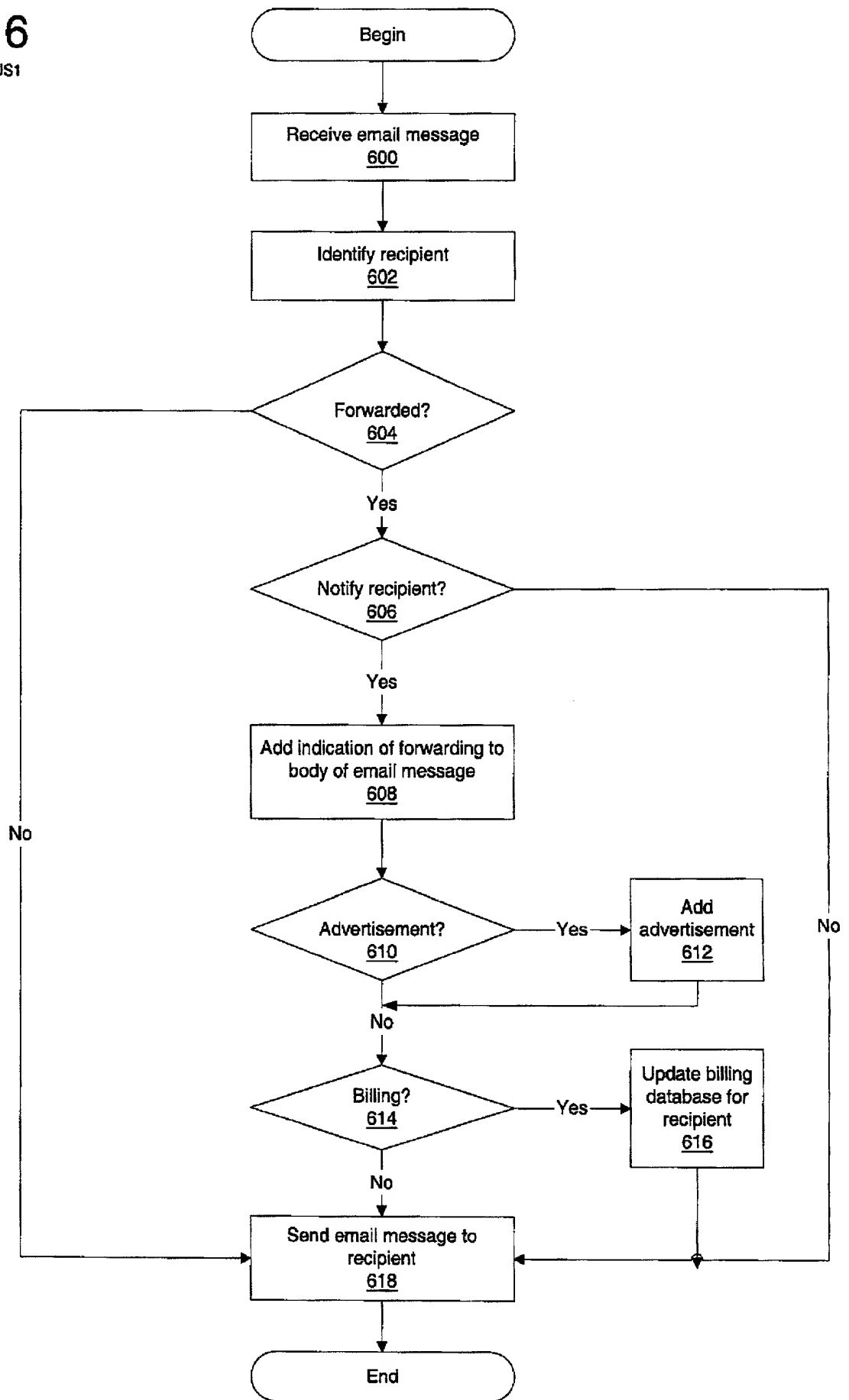


Figure 6

AUS9-2000-0403-US1



**DECLARATION AND POWER OF ATTORNEY FOR
PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**NOTIFICATION OF AUTOMATICALLY FORWARDED ELECTRONIC MAIL MESSAGES
IN A DATA PROCESSING SYSTEM**

the specification of which (check one)

X is attached hereto.

— was filed on _____
as Application Serial No. _____
and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):

Priority Claimed

(Number) (Country) (Day/Month/Year) Yes No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information material to the patentability of this application as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the

prior application and the national or PCT international filing date of this application:

(Application Serial #)

(Filing Date)

(Status)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John W. Henderson, Jr., Reg. No. 26,907; Thomas E. Tyson, Reg. No. 28,543; James H. Barksdale, Jr., Reg. No. 24,091; Casimer K. Salys, Reg. No. 28,900; Robert M. Carwell, Reg. No. 28,499; Douglas H. Lefevre, Reg. No. 26,193; Jeffrey S. LaBaw, Reg. No. 31,633; David A. Mims, Jr., Reg. 32,708; Volel Emile, Reg. No. 39,969; Anthony V. England, Reg. No. 35,129; Leslie A. Van Leeuwen, Reg. No. 42,196; Christopher A. Hughes, Reg. No. 26,914; Edward A. Pennington, Reg. No. 32,588; John E. Hoel, Reg. No. 26,279; Joseph C. Redmond, Jr., Reg. No. 18,753; Marilyn S. Dawkins, Reg. No. 31,140; Mark E. McBurney, Reg. No. 33,114; Duke W. Yee, Reg. No. 34,285; Colin P. Cahoon, Reg. No. 38,836; Stephen R. Loe, Reg. No. 43,757; Stephen J. Walder, Jr., Reg. No. 41,534; Charles D. Stepps, Jr., Reg. No. 45,880; and Stephen R. Tkacs, Reg. No. P-46,430.

Send correspondence to: Duke W. Yee, Carstens, Yee & Cahoon, LLP, P.O. Box 802334, Dallas, Texas 75380 and direct all telephone calls to Duke W. Yee, (972) 367-2001

FULL NAME OF SOLE OR FIRST INVENTOR: David A. Cordray

INVENTORS SIGNATURE: David A. Cordray

DATE: August 14, 2000

RESIDENCE: 5406 Tortuga Trail
Austin, Texas 78731-4542

CITIZENSHIP: United States

POST OFFICE ADDRESS: SAME AS ABOVE

Docket No.
AUS9-2000-0403-us1

FULL NAME OF SECOND INVENTOR: Jerry Walter Malcolm

INVENTORS SIGNATURE: Jerry Walter Malcolm DATE: August 28, 2000

RESIDENCE: 13016 Scofield Farms
Austin, Texas 78727

CITIZENSHIP: United States

POST OFFICE ADDRESS: SAME AS ABOVE